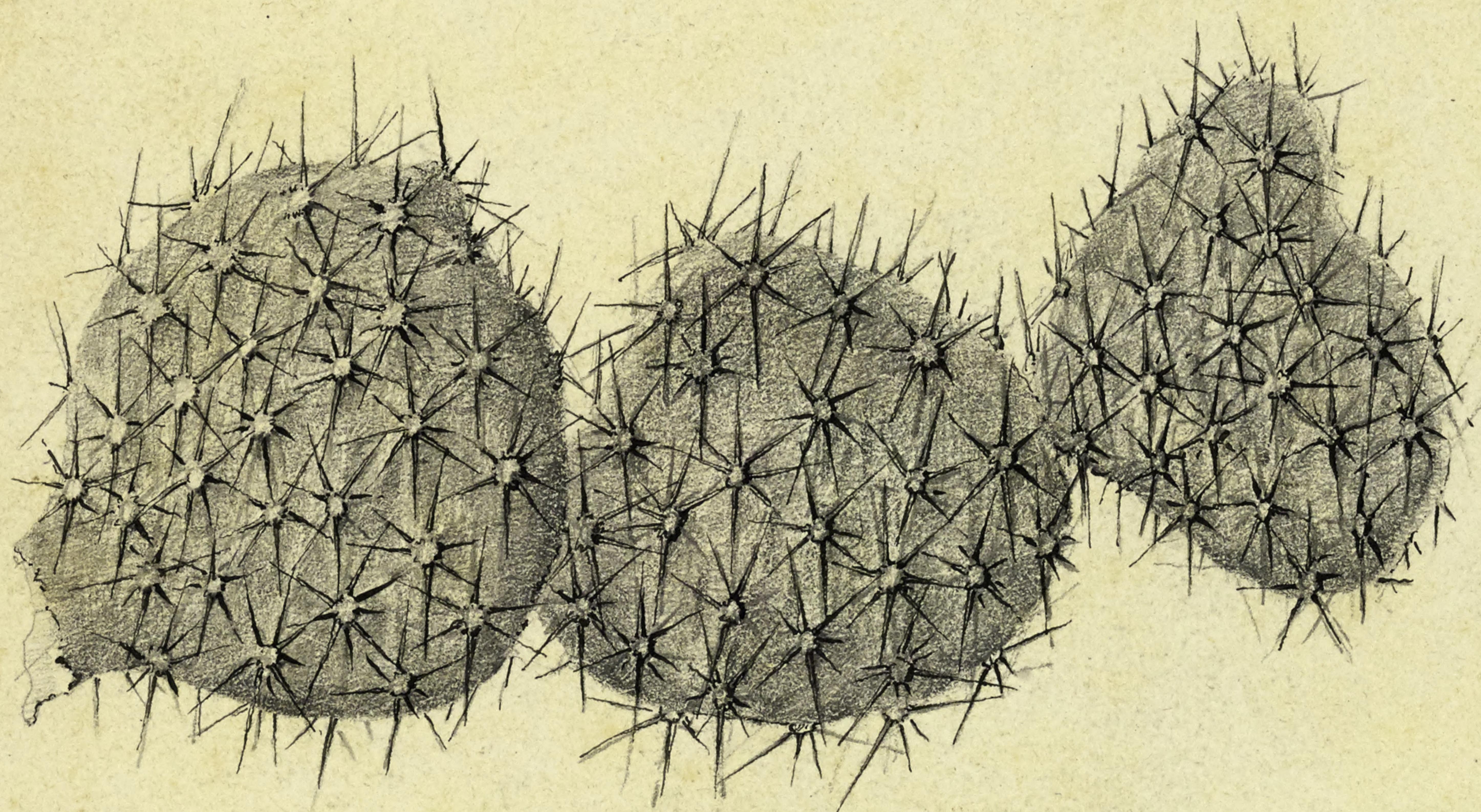


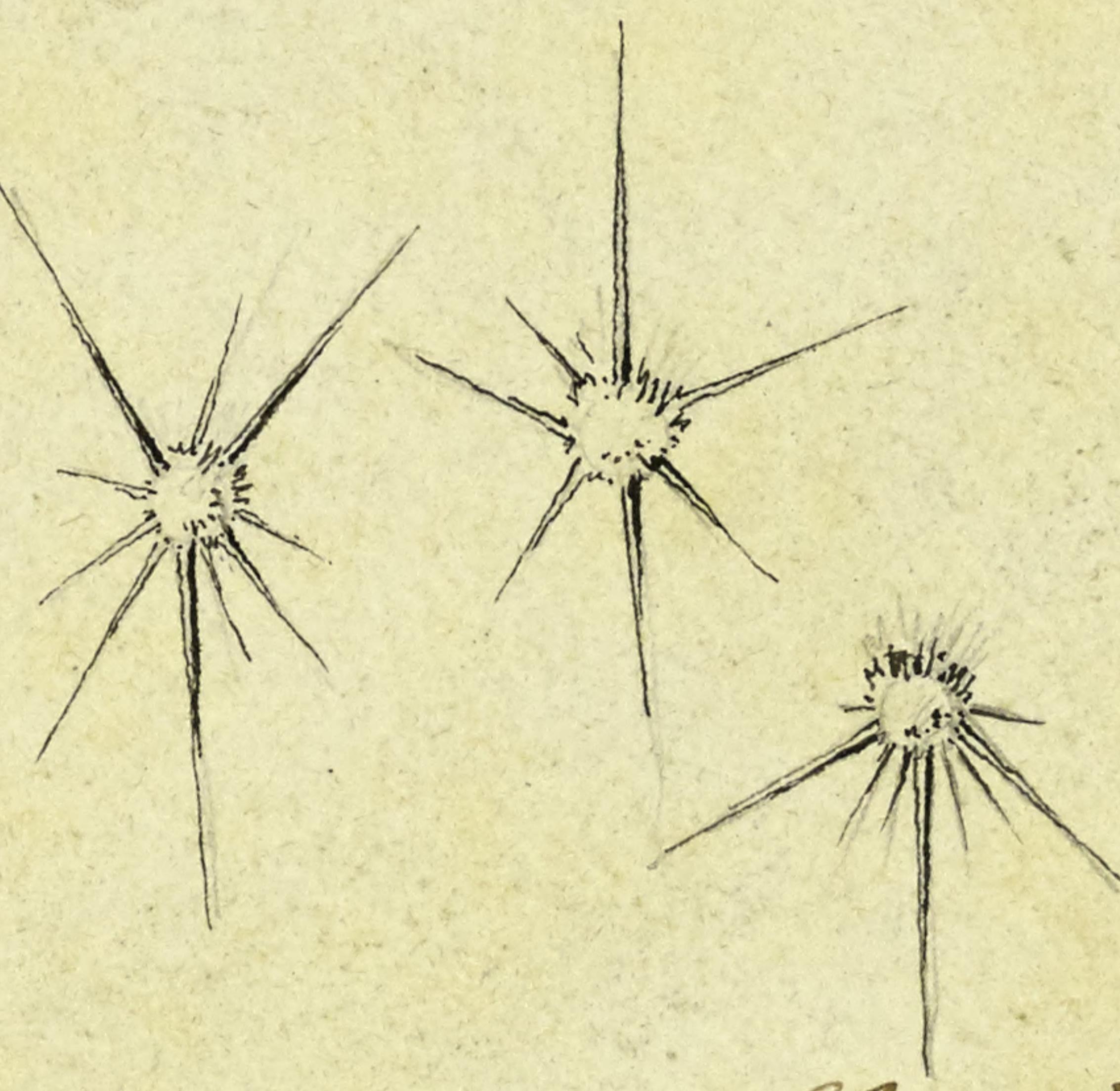
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BOTANICAL NOTEBOOKS

*Pagination Note:*  
*Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.*

No 7.



Arthur Schott del.



*O. aronaria*

below El Paso, common on alluvial soil



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cm

1 2 3 4 5 6 7 8 9 10

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MISSOURI  
BOTANICAL  
GARDEN

2492

Opuntia ~~leptophylla~~

repens, frontibus rubescens.

Valley of the Rio Bravo between  
El Paso & the Guadalupe Lando.

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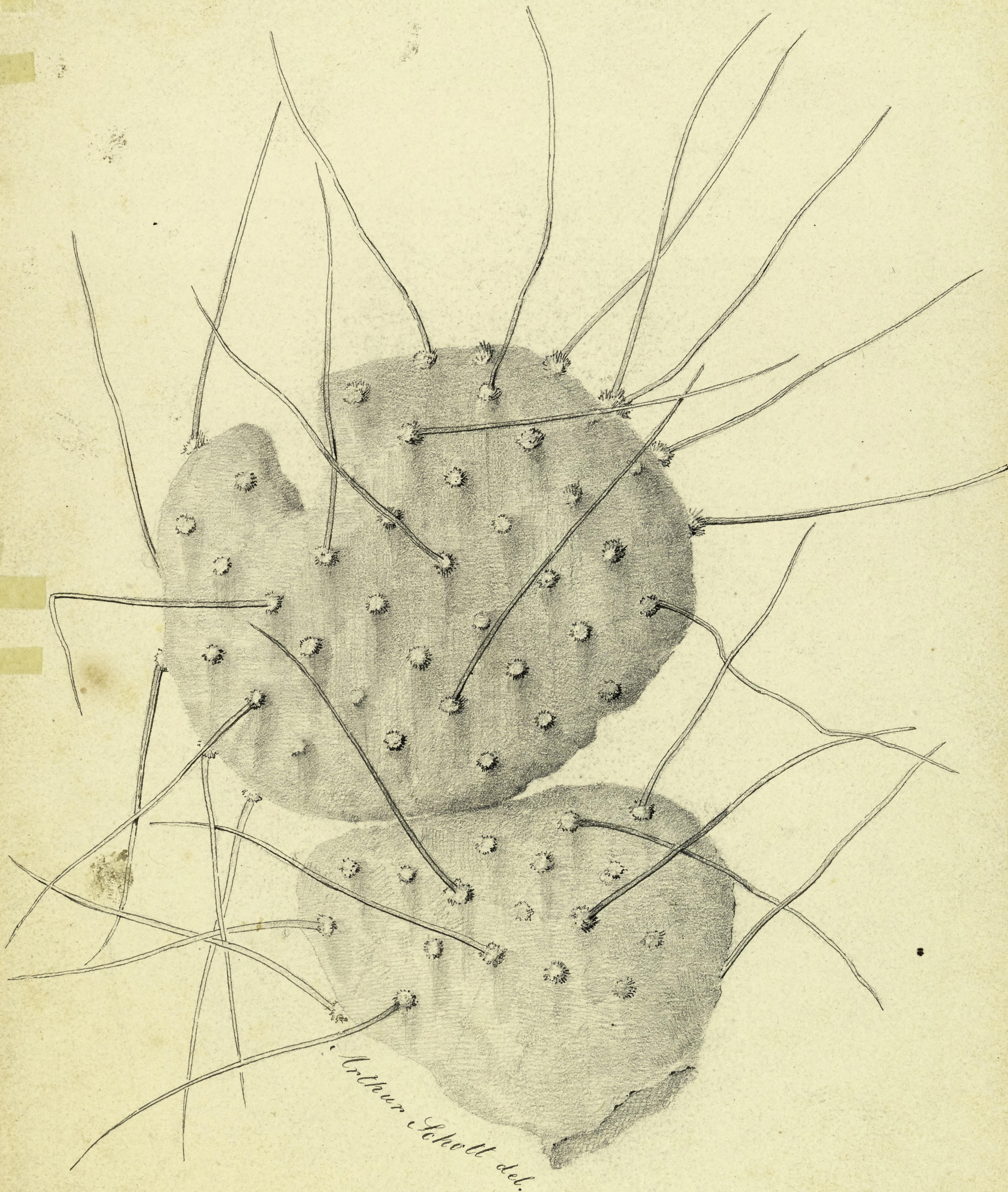
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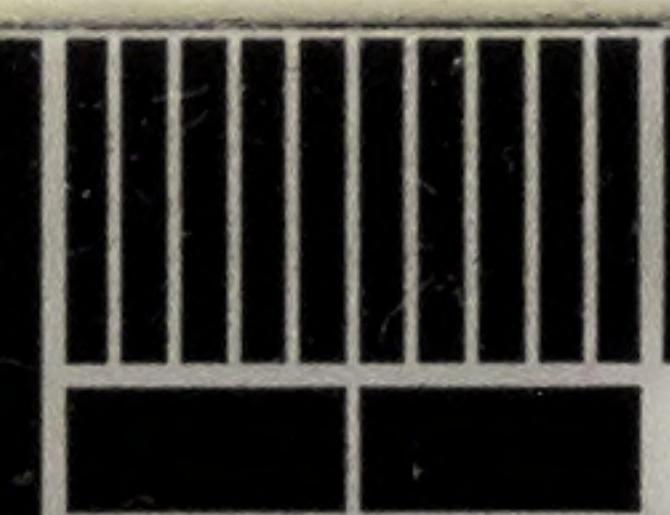


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BOTANICAL  
GARDEN

No 2.  
No 5



El Paso & upper part of Rio Bravo Country  
probably on igneous rocks & their debris.



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cm

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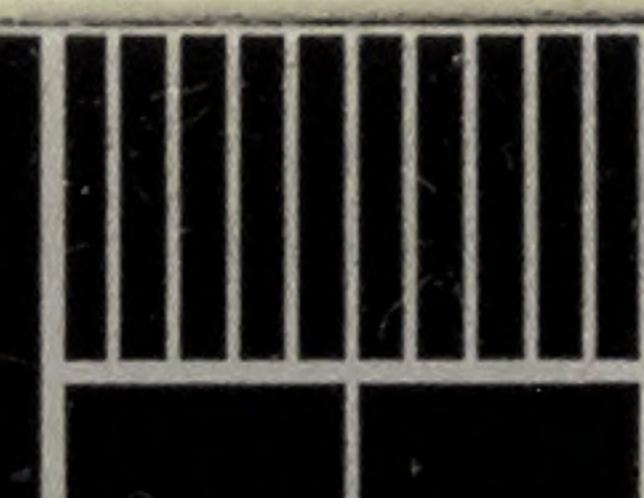


MISSOURI  
BOTANICAL  
GARDEN

2493

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*Opuntia* *Panz. sp.*  
*frontalis* *pergracida*  
E. Goss



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GARDEN

1<sup>st</sup> November 1846. In sandy, pebbly and general in stony soil, on low  
plains, hills and mountains, <sup>Santa Fe;</sup> ~~near~~ spreading and crowding over *Opuntia*  
spots & from 2 to 3 feet diameter. Some specimens without spines. <sup>(the smaller ones)</sup>  
Also frequently seen on the road from Bent's Fort to Santa Fe.  
A. W. Schleicher



0 1 2 3 4 5 6 7 8 9 10

cm



MISSOURI  
BOTANICAL  
GARDEN

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4<sup>th</sup> November 1846. Santa Fe. To Cactus No 8. — — — — — 2494 19.  
4<sup>th</sup> November 1846. Santa Fe. From a pointed flat-leaved Cactus. 20.  
Fruit soft at the time it was gathered. ~~MISSOURI BOTANICAL GARDEN~~  
1<sup>st</sup> November 1846. Santa Fe. To Cactus No 9. ~~MISSOURI BOTANICAL GARDEN~~ 21.  
4<sup>th</sup> November 1846. Santa Fe. Hard and dry fruit from a pointed flat 22.  
~~MISSOURI BOTANICAL GARDEN~~  
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cm

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BOTANICAL  
GARDEN

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leaved Cactus. Mountains. 2495 ~~2495~~  
MISSOURI BOTANICAL GARDEN 23.  
1<sup>st</sup> November 1846. Santa Fe. Dry cones from tree No. 1.  
1<sup>st</sup> November 1846. Santa Fe. or tree No. 1. 24.



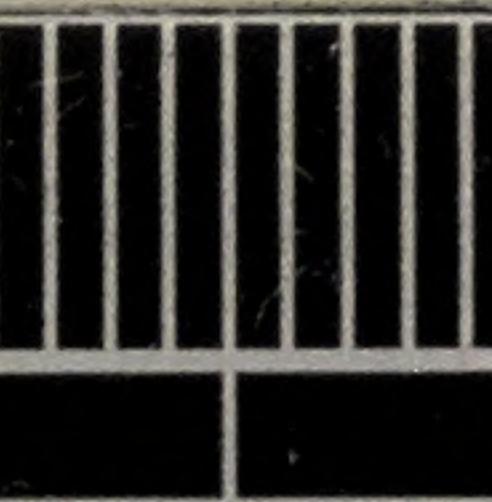
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# MIS BOTAS GÀ

# served

probable  
posterior Egg & Air very similar to last. & probably  
run of it with longer and more numerous spines; and  
grey or reddish.

Between Belknap and Cannon Rivers, <sup>as far east as</sup> ~~between~~ <sup>the</sup> Eagan,  
Valley, Wm. Gable,



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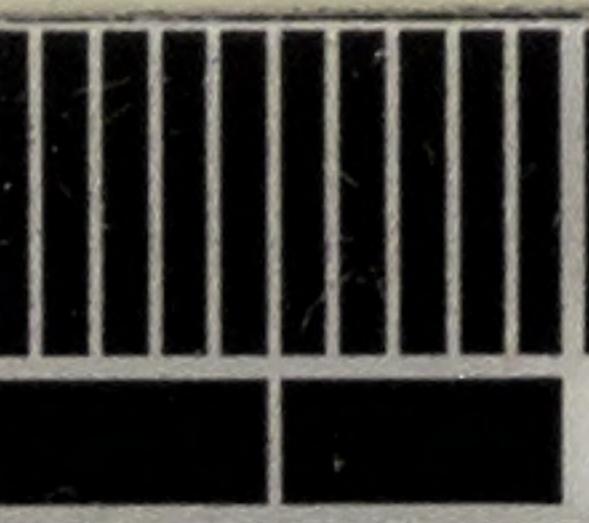
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# MISSOURI BOTANICAL GARDEN

2496

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0 1 2 3 4 5 6 7 8 9 10  
cm

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BOTANICAL  
GARDEN

Jobb 20. I.

Opuntia x anthaoaster nsp. lig. <sup>abund</sup>  
Humilis, articulata anomalous, ~~aculeata~~ longiradiata  
flooded stipites great lig.

Croa ovata s. lebglbosa, abbreviate?  
Points 5-7 inches, at most, long, spines  
abundant, 2-3 inches long.  
Sand-dunes at Magdalene Bay (no specimen)



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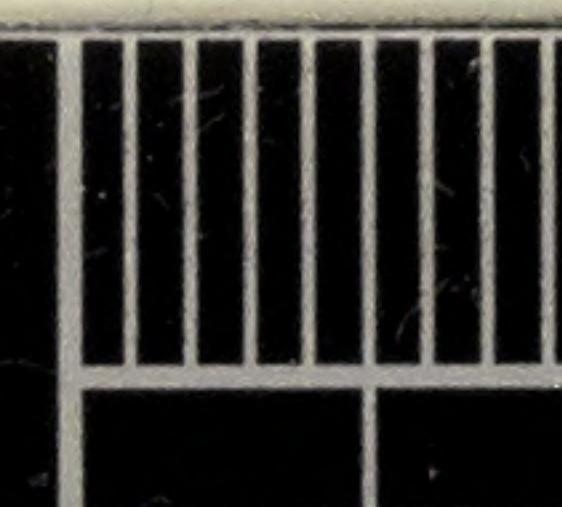


MISSOURI  
BOTANICAL  
GARDEN

2497

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Fourth Phenicia  
near Magdalena  
Color when ripe un  
surface covered w  
Unfortunately I  
specimen. Non



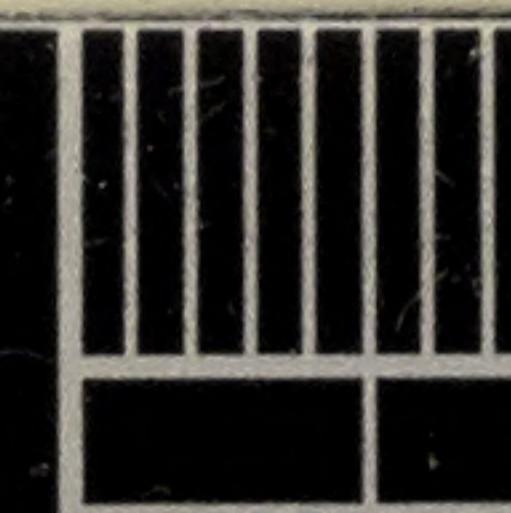
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20. A fourth Opuntia I observed only among the sand dunes near Magdalena Bay. The unripe fruit is short & robust (color when ripe unknown) <sup>leaves</sup> <sup>leaves</sup> small 5 to 7 inches at most & surface covered with very long yellow spines 2 or 3 inches in length. Unfortunately I never saw it afterwards & failed to procure a specimen. None of these species were in flower.



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GARDEN

Yours truly for my name & my good name  
(Engelm.) magnolia 112

MISSOURI BOTANICAL GARDEN  
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2498

6



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cm

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MISSOURI  
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GARDEN

1) Yuna tapona Yuna is the generic name

July 20. a.



Opuntia tapona n.sp. Lg. (Platopuntia)

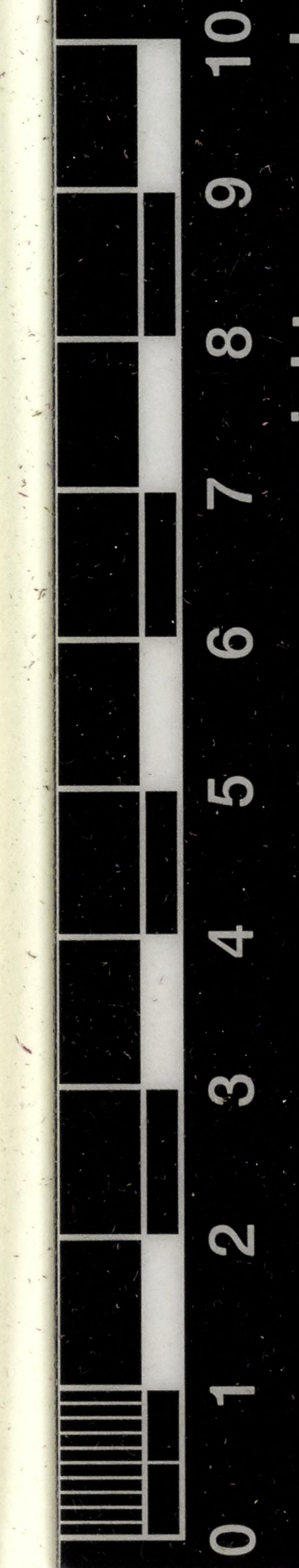
articulis magnis obvolutis, ~~and~~ tabernaculatis  
areolis distantibus, ovatis, magna dicta brevis gerantibus  
aculis basibus paucis pallidis, magnis compaginis  
basis elevata elongata areolis plus longis

tabernaculis iug. dentibus stipitata

sandy soil, especially southward, Loreto, etc.  
fruits 8-10 inches long; spines 2 or rarely  
more, 1-1/2 inch long, berry 5-6 inches  
(always? dark) purple, densely ~~covered~~ tabernaculatum

surface, 8 or 10 inches long, oval or ovoid. The fine spines are  
whitish when fresh. Common on sandy soil especially toward  
the South.

6) Yuna Blanca or white Opuntia is scarcely  
distinguishable from the preceding except  
the fruit which is short, robust, & when



2499

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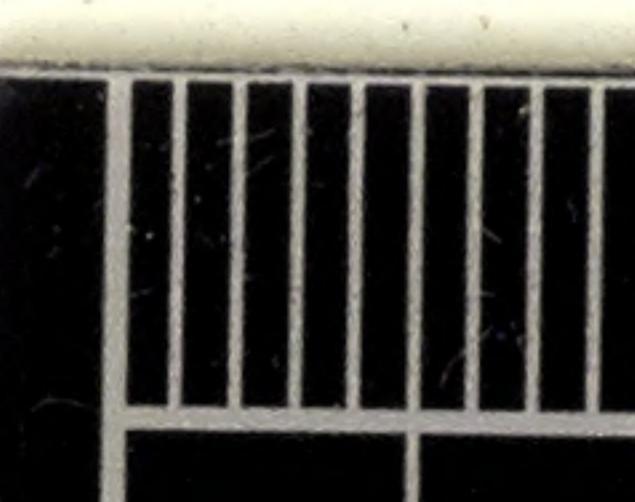
Of the true flat leaved Opuntias, there are at least 3 species found in S. Cal. Besides the common cultivated species found all over the Mexican countries.

The 1<sup>st</sup> is represented by Specimen No 20 & is known as Tapona = bottlestopper

a) the "Tuna tapona" "Tuna" is the generic name of the Opuntias - This species is called tapona from the fanciful resemblance of its fruit to a 'tapon' or bottle stopper. Its form is represented in the margin. It is a rather dark red & somewhat undulated, the apex of each mamilla being crowded with the usual tuft of fine hair like spines. The spines, (see specimen) are not very large spaced 2 inches apart, leaf undulated on the surface, 8 or 10 inches long, oval or ovoid. The fine spines are white when fresh. Common on sandy soil especially toward the South.

b) Tuna Blanca or white Opuntia is scarcely distinguishable from the preceding except by the fruit which is short, robust, & when ripe is a pale yellowish white. Seeds large & numerous - Found on the plains West of Comondu.

c) Tuna Mora or dark Opuntia resembles the tapona in the shape of the fruit except that while conical it is a third or more shorter. It is a dark brownish red when ripe - Leaves not distinctive.



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BOTANICAL  
GARDEN

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# MISSOURI BOTANICAL GARDEN

*Opuntia Refugii* grown in the open air, fruit ripe in October, rather plump (see figure in Part Whipple, pl. ) remains attached to the plant throughout the winter, but becomes shrivelled.

I examined them April 15<sup>th</sup> 1862.

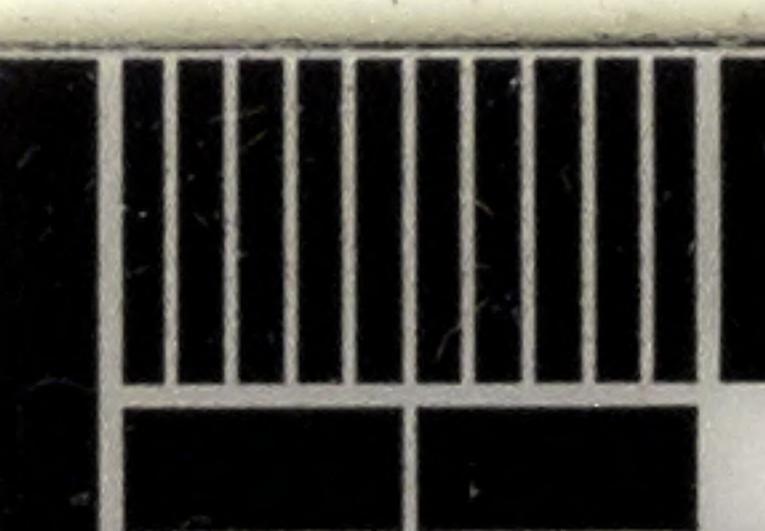
ruit shrivelled, deeply umbilicate; ~~purple~~ brown perianth greenish, and towards the outside slightly reddish, cells small, rather dry, stellate crystals rather sparing.

Seeds more or less horizontal, attached to a ~~plumule~~ a little shorter than they are themselves. —

In these seeds the faces ~~of the~~ <sup>of the</sup> ~~upper~~ <sup>upper</sup> ~~lower~~ <sup>lower</sup> flat sides are evidently quite free of any attached cells, <sup>such as</sup> ~~which~~ I found last fall to be abundant on the seeds of *O. Engelmanni* and others.

Here the cells occupy the ~~face~~ <sup>face</sup> ~~faces~~ <sup>faces</sup> ~~itself~~ <sup>itself</sup> and ~~the~~ <sup>the</sup> ~~rim~~ <sup>rim</sup> of the seed. Those on the ~~face~~ <sup>face</sup> ~~faces~~ <sup>faces</sup> ~~itself~~ <sup>itself</sup> are small and transparent; those on the ~~rim~~ <sup>rim</sup> are much larger, apparently usually 2 or 3 constituting one "hair", the end cell being by largest, as I found it also in *O. Engelmanni*, *O. glaucocephala*. Those on the ~~rim~~ <sup>rim</sup> ~~itself~~ <sup>itself</sup> are the largest, especially near the insertion of the ~~face~~ <sup>face</sup> ~~faces~~ <sup>faces</sup> ~~itself~~ <sup>itself</sup>, towards the ~~face~~ <sup>face</sup> they become smaller and even ~~disintegrate~~. The cells are filled with a pale red, thick,ropy, mucilaginous, quite tenaceous and glutinous liquid, very pale red.

See figure



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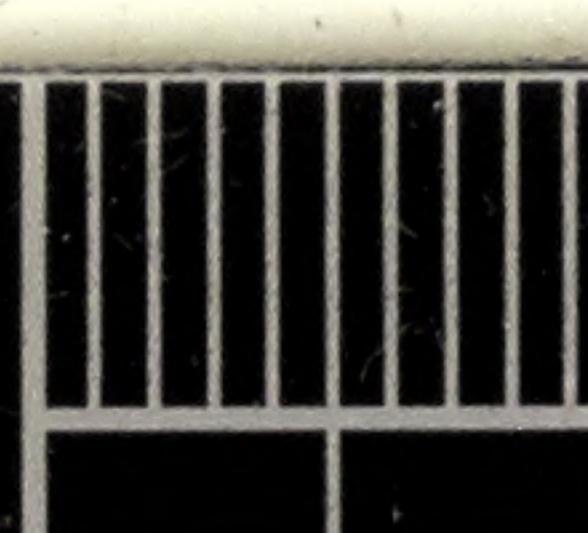
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GARDEN

2501

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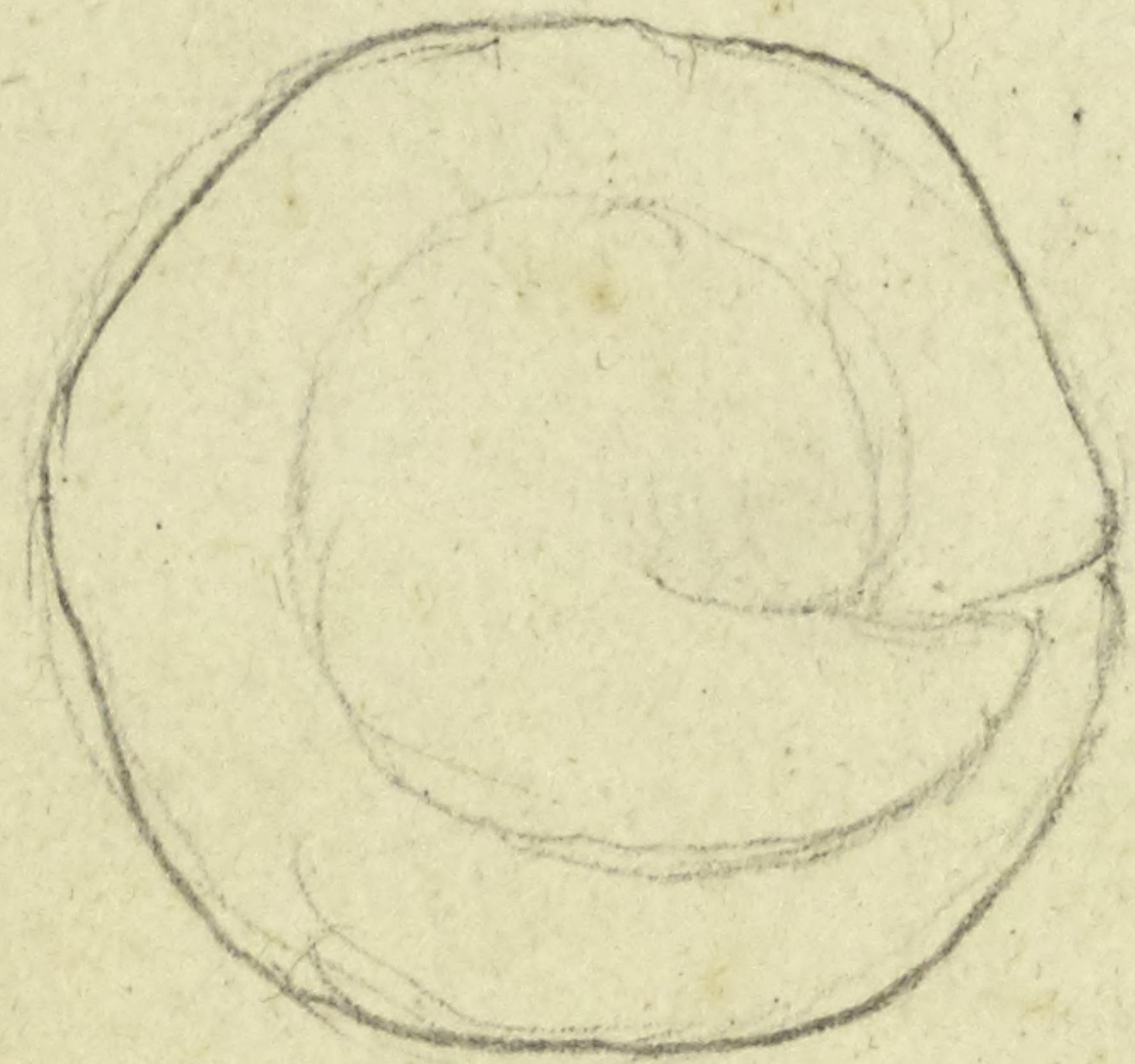
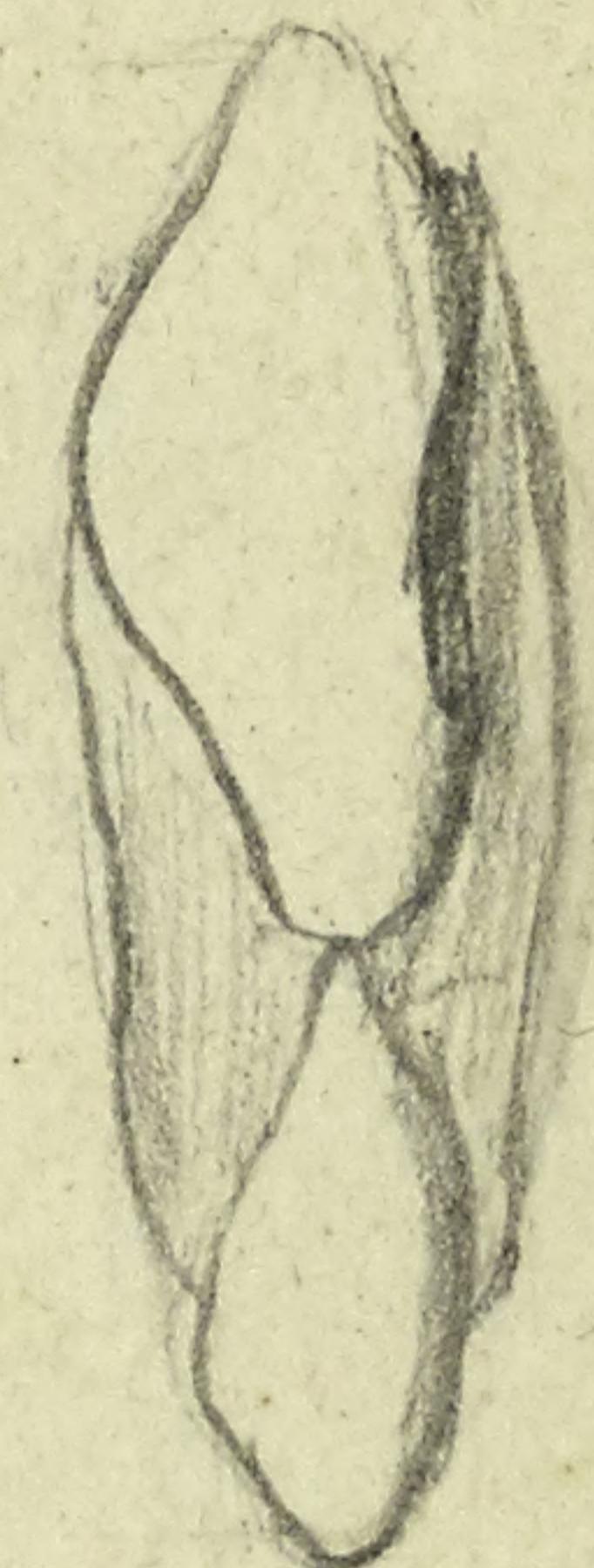
MISSOURI  
BOTANICAL  
GARDEN

*Op. missouriensis*

Jan 27 1875

Nebraska

84



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cm

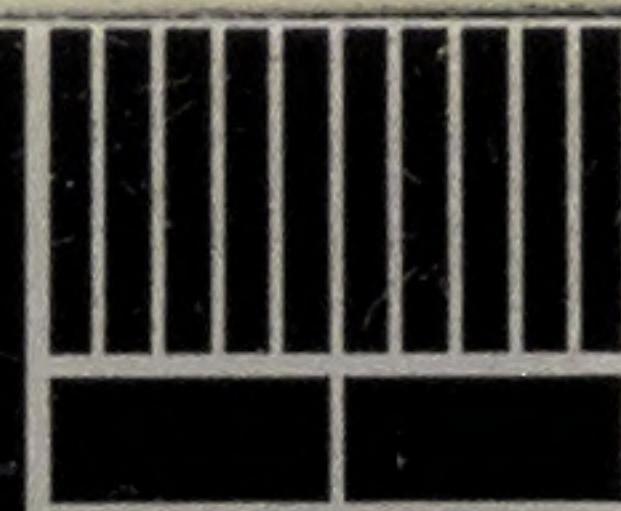
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GARDEN

2502

MISSOURI BOTANICAL GARDEN  
GEORGE ENGELMANN PAPERS



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cm

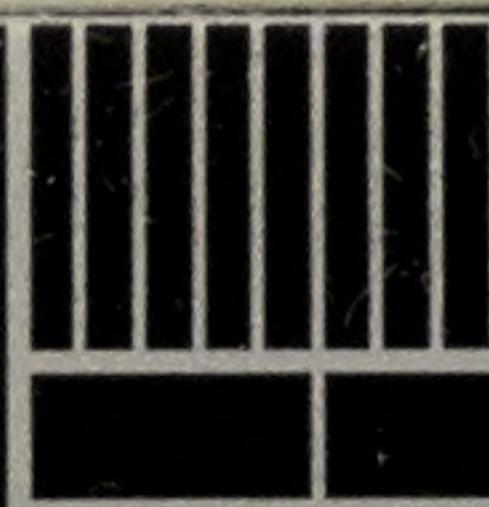
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GARDEN

*Opuntia Missouriensis* - Bloom in first week in  
June 1874, before *Op. Rafinesquii*  
remarkable on account of the short and thick  
spiny ovaries and the large flowers with  
green stigmas

Flowered again before Rafinesque - 1875



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2503

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cm

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